

indicate that the display is integrated into the image capture unit and digital camera, respectively. Support for this amendment can be found in Figure 3. Claim 24 has been amended to recite that the image sensor is an image orientation sensor that determines the first orientation of the image and the second orientation of the image capture unit. Similarly, new claims 39-40 recite orientation sensors used to determine the first orientation of the image and the second orientation of the image capture unit. Support for the amendments to claim 24 and new claims 39-40 can be found in Figures 5 and 6 and in the specification, page 11, line 22-page 12, line 8. Claims 41-43 recite a method system and digital camera in which the image capture unit or digital camera can be rotated during display of the image and wherein the image can be rotated to account for this rotation of the image capture unit or digital camera, respectively. Support for new claims 41-43 can be found in Figures 12 and 13 (which discuss checking the orientation of the camera and the image and displaying the image) and page 17, lines 7-9. Claims 44-46 recite that the image capture unit, digital camera and image can be either in a portrait or a landscape orientation. Claims 44-46 also more specifically recite how the image is rotated or displayed in order to account for differences or similarities in the first orientation and the second orientation. Support for claims 44-46 can be found in Figures 10-13. Consequently, Applicants respectfully submit that no new matter has been added.

In the above-identified Final Office Action, the Examiner objected to the specification because of missing serial numbers. Applicants have amended the specification to provide the serial numbers. Consequently, Applicants respectfully submit that the Examiner's objection to the disclosure has been overcome.

In the above-mentioned Final Office Action, the Examiner rejected claims 26 and 38 under 35 U.S.C. § 112 as being indefinite. The Examiner rejected claim 26 because of the

recitation of a "second buffer." Applicants have amended claim 26 to recite a "buffer" in lieu of a second buffer. The Examiner rejected claim 38 because the Examiner stated that there was insufficient antecedent basis for the term "the display of the digital camera." However, claim 38 depends on claim 34. Claim 34 previously recited a display as the last element. Claim 34, as amended, recites an integrated display. Consequently, Applicants have amended claim 38 to recite "the integrated display" of the digital camera. Thus, Applicants respectfully submit that claim 38 is clear and definite as presented. Accordingly, Applicants respectfully submit that the Examiner's rejections under 35 U.S.C. § 112 has been overcome.

In the above-mentioned Final Office Action, the Examiner also rejected claims 34 and 35 under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,900,909 ("Parulski I"). The Examiner also rejected claims 1-7, 9-10, 14-16, 18, 20-27, 29-30 and 36-38 under 35 U.S.C. § 103 as being unpatentable over Parulski I in further view of U.S. Patent No. 5,559,554 ("Uekane"). The Examiner also rejected claims 8 and 28 as being unpatentable over Parulski I in view of Uekane in further view of in further view of U.S. Patent No. 5,270,831 ("Parulski II"). The Examiner also rejected claims 11, 12, 13, 17 and 31-33 under 35 U.S.C. § 103 as being unpatentable over Parulski in view of Uekane in further view of U.S. Patent No. 5,949,408 ("Kang"). In the response to the arguments, the Examiner also noted that Parulski I discloses a digital camera that displays images on the display of the digital camera and that "[a]lthough the applicant's invention has the display located directly on the camera, the prior art meets the *claimed invention*." (Emphasis original).

Applicants have amended claims 1 recite that the display is integrated into the image capture unit. Applicants have amended claim 34 to recite that the digital camera includes an integrated display. Thus, Applicants respectfully submit that claims 1 and 34 make it clear that

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the display is part of, or integrated into, the image capture unit and digital camera, respectively. Applicants also note that claim 18 had previously recited that the display is part of the image capture unit.

The Examiner rejected claims 34 and 35 as being anticipated by Parulski I. Applicants respectfully traverse the Examiner's rejection. Claim 34 recites a digital camera which determines the first orientation of the image at capture, and determines the second orientation of the digital camera at display of the image. The two orientations are determined at two different times. Once these orientations are determined, the first orientation of the image at capture and the second orientation of the digital camera at display are compared. The image is then oriented to ensure that the image can be displayed in the same orientation as the digital camera on the integrated display of the digital camera.

In contrast, Parulski neither teaches nor suggests the digital camera recited in claim 34. In particular, Parulski neither teaches nor suggests determining two orientations at different times, one for the image at capture of the image and a second of the digital camera at display of the captured image, then displaying the image in the proper orientation on the integrated display of the digital camera.

The digital camera of Parulski I functions in conjunction with a separate computer system. The digital camera of Parulski I merely stores the information relating to the image and its orientation at capture. The orientation of the image is determined by the orientation of the digital camera at the time that the image is captured. Parulski I, col. 5, lines 43-53. The image information is stored in a memory card and read by a processor (32) within a **separate computer system**. Parulski I, col. 3, lines 50-53. This separate processor can read this information from a memory card that alone is coupled to the computer system. Parulski I, col. 3, lines 50-53.

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Alternatively, the separate processor retrieves the image information from a memory card that is both coupled to the computer system and tethered to the digital camera. Parulski I, col. 3, lines 54-58. Based on the information associated with the images, the images are properly displayed on the display of the separate computer system, not on a display for the digital camera itself. Parulski I, col. 4, lines 15-20 and Fig. 2 (indicating that the CRT display 34 is part of the computer system to which the memory card is attached).

Thus, Parulski I determines the orientation of the image at the time of capture. Nothing in Parulski I indicates that the orientation of the digital camera is determined at a later time when the captured image is to be displayed. Furthermore, nothing in Parulski I indicates that the image might be rotated based on a comparison of the first orientation of the image corresponding to capture and the second orientation of the digital camera corresponding to display. Consequently, Parulski I cannot teach or suggest a first orientation of the image corresponding to capture, a second orientation of the digital camera corresponding to display, means for comparing these two orientations and means for rotating the image so that the image is displayed on the integrated display in the second orientation of the digital camera. Thus, Parulski I cannot teach or suggest the digital camera recited in claim 34.

Claim 35 depends upon independent claim 34. Consequently, the arguments herein apply with full force to claim 35. Accordingly, Applicants respectfully submit that claim 35 is allowable over the cited references.

In the above-mentioned Office Action, the Examiner also rejected claims 1-7, 9-10, 14-16, 18-27 and 29-30 as being obvious in light of Parulski I in view of Uekane.

Applicants respectfully traverse the Examiner's rejection. Claim 1 recites a method for "viewing an image in an capture unit." The method recited in claim 1 determines the first

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orientation of the image at capture of the image. The method recited in claim 1 also determines the second orientation of the image capture unit at a time corresponding to display of the captured image. The method recited in claim 1 also determines whether the first orientation of the image is different from the second orientation of the image capture unit and rotates the image if the first orientation of the image is different from the second orientation of the image capture unit. The image can then be displayed on the integrated display of the image capture unit. Thus, the method and system recited in claims 1 and 18 determine a first orientation for an image at capture and a second orientation for the image capture unit at display.

In contrast, Parulski I in view of Uekane fails to teach or suggest the method or system recited in claims 1 or 18, respectively. As discussed above with respect to claim 34, Parulski I fails to teach or suggest determining both a first orientation for the image at capture and a second orientation for the image capture device at display of the captured image. Parulski I also fails to teach or suggest comparing the first orientation of the image to the second orientation of the image capture device. Instead, Parulski I considers the orientation of the image capture device at the time of capture to be the orientation of the image. The orientation of the image only is then used to determine whether to rotate the image for display. Thus, Parulski I only determines the first orientation of the image at capture. Parulski I does not determine a second orientation of the image capture unit at display. Furthermore, Parulski I does not compare the first orientation of the image and the second orientation of the image capture unit at display time. Furthermore, Parulski I fails to teach or suggest providing the rotated image on a display of the image capture unit. Instead, Parulski I presents the image for viewing on a display for a separate computer system.

Uekane is directed at a video camera having a display that can rotate with respect to the

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camera lens. Uekane, col. 1, lines 7-13. Uekane discusses three orientations: normal, self-image picture-taking state I (180 degree rotation in one direction around the joint), and self-image picture-taking state II (180 degree rotation in the opposite direction around the joint). Uekane, col. 10, lines 3-15, Figures 12, 13, and 14. Uekane is concerned with allowing a user to view the image when the user is capturing the image. For example, Uekane states that "[f]or effecting the self-image taking, with the camera portion 1 fixed, monitor portion 2 is rotated upside down . . . [T]his state is called self-image picture-taking state I . . ." Uekane, col. 5, lines 9-17. Similarly, Uekane also states that "[f]or effecting the self-image taking[ in another state], with the monitor portion 2 fixed, camera portion 1 is rotated upside down . . . [T]his state is called self-image picture-taking state II . . ." Uekane, col. 5, lines 24-30. Self-image picture-taking states I and II are also depicted in Figures 13 and 14, respectively. Uekane does display the image upright while the image is being captured. Uekane, col. 14, lines 3-5 and 21-26. Based on the orientation of the lens (i.e. whether the camera is in self-image picture-taking state I or II), Uekane alters the way in which text is displayed to the user. Compare Uekane Fig. 6 with Uekane Fig. 13. The images displayed on the view screen are captured on a videotape. Uekane, col. 14, lines 5-12.

Parulski I in view of Uekane fail to teach or suggest the method and system recited in claims 1 and 18, respectively. One of ordinary skill in the art would not be motivated to combine the teachings of Uekane with those of Parulski I. Furthermore, even if the teachings of Uekane are added to those of Parulski I, the combination neither teaches nor suggests the method and system recited in claims 1 and 18.

Uekane is directed at presenting images currently being captured to the user of a video camera. Thus, Uekane is similar to the record mode of a conventional digital camera. In contrast, Parulski I is directed at viewing previously captured images for a digital camera which captures

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still images. Thus, Parulski is similar to the play mode of a conventional digital camera. The video camera of Uekane and the combination of the digital camera and computer system of Parulski I each apparently function for their intended purpose. Thus, one of ordinary skill in the art would not be motivated to add the teachings of Uekane to those of Parulski I.

Even if the teaching of Uekane were added to those of Parulski I, the combination would neither teach nor suggest the method and system recited in claims 1 and 18. Uekane could be considered to add the record mode, previously discussed, to the digital camera of Parulski. Thus, a display on the digital camera of Parulski could present images to a user in the desired orientation as the images are being captured.

However, the combination would still determine and use only the orientation of the image at the time the image is being captured. There is nothing in Uekane that indicates that both the first orientation of the image at capture and the second orientation of the image capture unit at display are determined. In particular, like Parulski I, Uekane does not determine a second orientation of the image capture unit at a display time that is separate from the first orientation of the image at capture. Furthermore, nothing in Uekane indicates that these two orientations, determined at separate times, are compared. Thus, Parulski I in view of Uekane cannot teach or suggest determining a first orientation of the image at capture and determining a second orientation of the image capture unit at a later display time. Furthermore, Parulski I in view of Uekane cannot teach or suggest comparing these different orientations, then rotating the image if the first orientation of the image at capture is different from the second orientation of the image capture unit at display. Parulski I in view of Uekane cannot teach or suggest these functions in part because these references do not teach or suggest determining the second orientation at display of the captured image. Consequently, Parulski I in view of Uekane cannot teach or

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Claims 2-7, 9-10 and 14-16 depend on independent claim 1. Claims 20-27 and 29-30 depend on independent claim 18. Consequently, the arguments herein apply with full force to claims 2-7, 9-10, 14-16, 20-27 and 29-30. Thus, Applicant respectfully submits that claims 2-7, 9-10, 14-16, 20-27 and 29-30 are allowable over Parulski I in view of Uekane.

The Examiner also rejected claims 8 and 28 under 35 U.S.C. § 103 as being obvious in light of Parulski I in view of Uekane in further view of Parulski II. In so doing, the Examiner stated that Parulski II “discloses that some degree of cropping of the image will be necessary in order to fit the image with the display. It would have been obvious to use the same method in [a] camera with a display having a certain amount of aspect ratio to fit a reoriented image so that the viewer may see the image since the ratios will have different values.

Applicant respectfully traverses the Examiner’s rejection. Claims 8 and 28 depend upon independent claims 1 and 18, respectively. Consequently, the arguments herein with respect to Parulski I in view of Uekane apply with full force to claims 8 and 28. As discussed above, Parulski I in view of Uekane fail to teach or suggest use a first orientation of the image and a second orientation of the image capture unit, comparison of the first orientation and the second orientation, and rotating the image if the first orientation is different from the second orientation.

Parulski II fails to remedy this defect of Parulski I in view of Uekane. Parulski II is directed at a system for scanning images that have been captured on photographic film. Parulski II, Abstract lines 1-6. The system of Parulski II scans in images on a strip of photographic film. Parulski II col. 4, lines 32-37. Once the photographic film has been scanned, a user views the scanned images, determines the orientations of the scanned images, and informs the system of the orientations of the scanned images. Parulski II col. 5, lines 63-67; col. 6, lines 9-15. The



scanned images are then stored on a transportable medium, such as a CD. Parulski II, col. 4, lines 50-59. Once the scanned images have been stored to a transportable medium, the transportable medium can be taken to a player which allows the scanned image to be displayed. Parulski II, col. 4, lines 50-59; Figure 1, item 20; and Figure 4. This player is apparently separate from the unit which scans the images. See Parulski II, Figures 1 and 4. The player can use the orientation of the scanned images to display the scanned images in the desired orientation. Thus, the transportable medium is placed in a separate playback unit in order for the images to be displayed in the desired orientation.

One of ordinary skill in the art would not be motivated to combine Parulski II with Parulski I and Uekane. Parulski II is concerned with processing of still images that have previously been captured on photographic film. This is in contrast to Uekane, which is directed to a video camera, and Parulski I, which is directed to a digital camera. If Uekane is combined with Parulski I to provide images in record mode, there is no need to use Parulski II because the data is already stored digitally. Consequently, one of ordinary skill in the art would not be motivated to combine Parulski II with Parulski I in view of Uekane.

Even if Parulski II is added to the teachings of Parulski I and Uekane, the combination would neither teach nor suggest the method and systems of claims 8 and 28. Like Parulski I and Uekane, Parulski II is only concerned with the orientation of the images as they are scanned in. See Parulski II Fig. 2 and accompanying discussion. This time can be analogized to the capture of the images. In this sense Parulski II could also be viewed as disclosing that the first orientation of the image is determined at capture. However, Parulski II does not determine another orientation upon display of the captured image. Thus, Parulski II does not determine both a first orientation of the image at capture and a second orientation of the image capture unit at display.

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Furthermore, Parulski II does not compare the second orientation of the image capture unit at display to the first orientation of the image at capture. Consequently, Parulski II cannot remedy the defects of Parulski I in view of Uekane. Parulski I in view of Uekane in further view of Parulski II thus fails to teach or suggest the method and system recited in claims 8 and 28, respectively. Accordingly, claims 8 and 28 are allowable over the cited references.

The Examiner also rejected claims 11, 12, 13, 17 and 31-33 under 35 U.S.C. § 103 as being obvious in light of Parulski and Uekane in view of Kang. In so doing, the Examiner pointed to Kang as teaching the use of icons.

Applicants respectfully traverse the Examiner's rejection. Claims 11-13 and 17 and claims 31-33 depend upon independent claims 1 and 18, respectively. Consequently, the arguments herein with respect to Parulski in view of Uekane apply with full force to claims 11-13, 17 and 33. As discussed above, Parulski I in view of Uekane fail to teach or suggest determining a first orientation of the image at capture, determining a second orientation of the image capture unit at display, comparing of the first orientation and the second orientation, and rotating the image if the first orientation is different from the second orientation.

Kang fails to remedy the defect of Parulski I in view of Uekane. Kang teaches the use of icons in a palmtop personal organizer. Kang, Abstract. However, Applicants can find no mention in Kang of determining both a first orientation of an image at capture and a second orientation of an image capture unit at a display time after capture. Furthermore, Applicants can find no mention in Kang of comparing the first orientation to the second orientation or of rotating the image if the first orientation is different from the second orientation. Consequently, Kang cannot remedy the defects of Parulski I in view of Uekane. Accordingly, Applicants respectfully submit that claims 11, 12, 13, 17 and 31-33 are allowable over the cited references.

Claims 36-38 depend upon independent claims 1, 18 and 34, respectively. Applicants also note that claims 36-38 further indicate that the images being displayed on the image capture unit or digital camera are previously captured images. Claims 36-38 also indicate that the image is decompressed. Thus, claims 36-38 make it clearer that the method, system and digital camera recited in claims 36, 37 and 38 are capable of displaying previously captured images, as in play mode. Accordingly, the arguments herein apply with full force to claims 36-38. Consequently, Applicants respectfully submit that claims 36-38 are allowable over the cited references.

#### New Claims and Claim 24

New claims 39-46 depend upon independent claims 1, 34 and 18. Consequently, the arguments herein apply with full force to claims 39-46. Accordingly, Applicants respectfully submits that new claims 39-46 are allowable as presented.

Furthermore, claims 24, 39 and 40 recite that an image orientation sensor is used to determine at least the second orientation of the image capture unit. As discussed above, Uekane, Parulski I and Parulski II do not discuss determining the second orientation of the image capture unit at display, much less determining this orientation using an image sensor. Consequently, claims 24, 39 and 40 are separately allowable over the cited references.

Claims 41-43 recite a method, system and digital camera in which image capture unit or digital camera can be rotated to a third orientation during display of the image. Claims 41-43 also recite that the third orientation is determined, differences between the previous (second) orientation of the image capture unit or digital camera and/or the first orientation and the third orientation are determined and the image rotated if required. In addition, the image is a captured image. Thus, the method, system and digital camera recited in claims 41-43 account for changes

in the orientation of the image capture unit or digital camera **during** display of the previously captured image.

The cited references, separately or in combination, fail to teach or suggest a method, system or digital camera that allow a user to rotate the image capture unit or digital camera during display of a captured image, that determine whether the new orientation requires that the image be rotated in order to properly display the image, and that rotate the image for display if required. As discussed above, none of the cited references determine both the first orientation of the image at capture and the second orientation of the image capture unit or digital camera at display of the captured image. For similar reasons, the cited references also do not teach or suggest determining a third orientation of the image capture unit or digital camera upon rotation of the image capture unit or digital camera, respectively, during display of the captured image. Since such a third orientation would not be determined, this orientation could not be compared to any previous orientation. Furthermore, the image would not be rotated to update the display based on the third orientation. Thus, none of the cited references could rotate the displayed captured image to account for changes in the orientation of the image capture unit or digital camera during display. Thus, the cited references cannot teach or suggest the method, system and digital camera recited in claims 41-43. Accordingly, Applicants respectfully submit that claims 41-43 are separately allowable over the cited references.

Claims 44-46 recite a method, system and digital camera in which the orientations of the image and image capture unit or digital camera are expressly allowed to be landscape (typically image capture unit/digital camera held upright) or portrait (image capture unit/digital camera typically rotated from upright by ninety degrees) orientation. Furthermore, claims 44-46 expressly recite that if the first orientation of the image at capture is a portrait orientation, while

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the second orientation of the image capture unit or digital camera is a landscape orientation during display, the image is rotated to be in the landscape orientation. Similarly, if the first orientation of the image at capture is a landscape orientation, while the second orientation of the image capture unit or digital camera is a portrait orientation during display, the image is rotated to be in the portrait orientation. If the first orientation of the image at capture matches the orientation of the image capture unit upon display, then the image is not rotated. Thus, claims 44-46 expressly indicate how the captured image is rotated or not rotated based on its own orientation and the orientation of the image capture unit or digital camera.

The cited references, separately or in combination, fail to teach or suggest the method, system and digital camera recited in claims 44-46. In particular, none of the cited references discuss the specifics of the possible differences in the orientations of the image at capture and the image capture unit or digital camera at display and specifically how these differences in orientation can be accounted for by rotating the image from portrait to landscape orientation, or vice versa. Consequently, the cited references cannot teach or suggest the method, system or digital camera recited in claims 44-46. Accordingly, Applicants respectfully submit that claims 44-46 are separately allowable over the cited references.

In view of the foregoing, it is submitted that the claims in the application are patentable over the cited reference and are in condition for allowance. Reconsideration of the rejections and objections is requested.

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Applicant's attorney believes that this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicant's attorney at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Stephen G. Sullivan', is written over a horizontal line.

Stephen G. Sullivan  
Attorney for Applicant  
Reg. No. 38,329  
(650) 493-4540

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